## REMARKS

### I. INTRODUCTION

Claims 1, 3, 18 and 21 have been amended. No new matter has been added. Thus, claims 1-22 are pending in the present application. Applicant wishes to thank the Examiner for indicating that claims 16, 17, 19, 20 and 22 are allowed, and that claims 6 and 11, if rewritten in independent form, would be allowable. However, in view of the above amendments and the following remarks, it is respectfully submitted that all of the presently pending claims are allowable.

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## II. THE 35 U.S.C. § 103(a) REJECTIONS SHOULD BE WITHDRAWN

The Examiner has rejected claims 1-5, 7-10, 12-15, 18 and 21 under 35 U.S.C. § 103(a) as unpatentable over U.S. Pat. No. 5,091,975 to Berger et al. (the "Berger patent") in view of U.S. Pat. No. 5,748,904 to Huang et al. (the "Huang patent"). (See 6/16/05 Office Action, ¶ 3, p. 2).

The Berger patent describes a method of compressing a signature signal, which is divided into a plurality of segments. (See Berger patent, abstract). A computer divides the signature signal into the plurality of segments, such that each segment is encoded using a modified ring-encoding technique and represented using eight bits. (See Berger patent, col. 3, lines 21-26).

The Huang patent describes a method for compressing graphic data by dividing the data into segments. Each segment is compressed using three algorithms that encode the data as a plurality of code-words. Each code-word for the segment is taken from the algorithm that can compress the largest number of pixels in the code-word. (See Huang patent, abstract). A compressor 5 contains three encoders: a run length encoder 51, a run index encoder 52, and a bit-map encoder 53. (Id. at col. 3, lines 38-40). Code-words are generated by each encoder and the code-word that can compress the largest number of pixels is used as the compressed data. (Id. at col. 3, lines 52-55).

Claim 1 of the present application is directed to a method for compressing the representation of points in a space, which includes the steps of "dividing a sequence of points into segments of successive points" and "determining a compression size for each of the segments, wherein the compression size varies based on a number of bits needed to represent each segment" and "compressing each of the segments into the compression size for each segment" in conjunction with "combining the compressed segments into a data stream." According to the specification, a sequence of points is divided into segments. For compression, one segment may require many bits to represent a coordinate (e.g., a large relative movement

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from an origin or a previous point to the coordinate), whereas a small relative movement may require only a few bits. (See Specification, ¶ [0031]). Thus, "each segment of data is compressed, using only the number of bits required for that segment." (Id at ¶ [0043]). As recited in claim 1, "wherein the compression size varies based on a number of bits needed to represent each segment."

The Examiner has correctly stated that the Berger patent does not disclose determining a compression size for each of the segments, wherein the compression size varies based on information in each segment. The Examiner has attempted to cure this deficiency with the Huang patent. However, the Huang patent teaches that graphic data should be divided into segments which are compressed using different algorithms, the smallest outputs of which are selected to represent the segments. Thus, the size of the compressed segments varies based on the algorithm selected rather than on "a number of bits needed to represent each segment." In contrast, the present application teaches and claims that a segment (i.e., a sequence of points in a space) can be further divided into smaller segments. The encoding of these smaller segments is compressed in accordance with the amount of bits needed to represent the smaller segments. A segment size S can be varied, and the value of S that results in the best compression is chosen. (Id at ¶¶ [0030]-[0033]). The compressed smaller segments are then combined to form a representation of the original segment. Thus, it is respectfully submitted that neither the Berger patent nor the Huang patent, either alone or in combination, disclose or suggest "determining a compression size for each of the segments, wherein the compression size varies based on a number of bits needed to represent each segment" and "combining the compressed segments into a data stream," as recited in claim 1.

Accordingly, Applicant respectfully requests that the Examiner withdraw his rejection of claim 1. Because claims 2-15 depend from and, therefore, include the limitations of claim 1, it is respectfully submitted that these claims are allowable for at least the reasons stated above.

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Independent claim 18 includes substantially the same limitations as claim 1 including "determining a compression size for each of the segments, wherein the compression size varies based on a number of bits needed to represent each segment" and "combining the compressed segments into a data stream." Thus, Applicant respectfully submits that this claim is allowable for the same reasons stated above with reference to claim 1, and the Examiner should withdraw the rejection of this claim.
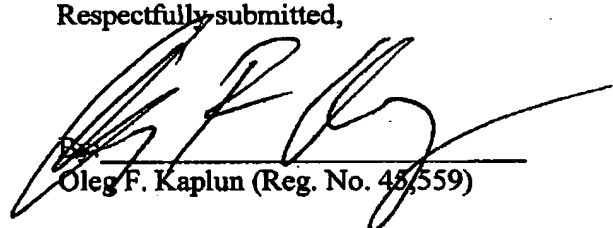
Independent claim 21 includes substantially the same limitations as claim 1 including "determining a compression size for each of the segments, wherein the compression size varies based on a number of bits needed to represent each segment" and "combining the compressed segments into a data stream." Thus, Applicant respectfully submits that this claim is allowable for the same reasons stated above with reference to claim 1, and the Examiner should withdraw the rejection of this claim.

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## CONCLUSION

In light of the foregoing, Applicant respectfully submits that all of the pending claims are in condition for allowance. All issues raised by the Examiner having been addressed, and an early and favorable action on the merits is earnestly solicited.

Respectfully submitted,

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